NEW

RECEIVED
AUG 3 1971
GROUP 250

350/171

359/629

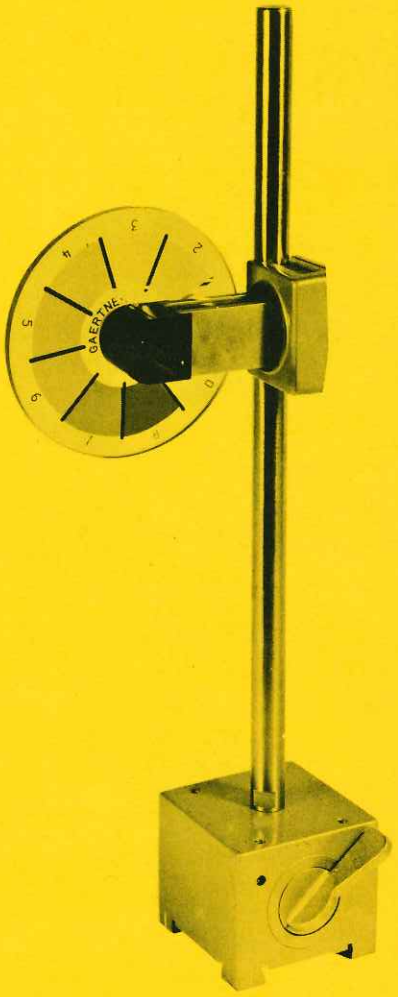
Bulletin 156-71 G

GAERTNER
OPTICAL INSTRUMENTATION

# Variable Segmented Beamsplitter

RECEIVED
AUG 3 1971
GROUP 250

The variable segmented beamsplitter consists of a circular glass disc 3 mm thick by 86 mm diameter with nine numbered segments of 2cm$^2$ optical aperture each. One segment is of low reflection coated clear glass. The other eight segments are uniformly coated with aluminum providing reflectivity in steps of 10%, 20%, 30%, 40%, 50%, 60%, 70% and 80% at 45° incidence.




The disc is magnetically coupled to a steel 13 mm vertical support rod which in turn is mounted in a standard magnetic base (Gaertner R281M).

Each segment of the beamsplitter may be sequentially introduced to an optical path by rotating the disc about its center. The magnetic holder provides for 3 axes of rotation plus vertical adjustment.

Applications include beamsplitting and beam attenuation in holography and optical data processing. This unit can be used in applications requiring controlled variation of transmitted light and reflected light intensity.

The segmented beamsplitter is equipped with a magnetic base for use on Gaertner rail or grid type optical/instrument benches or on steel surface plates. The beamsplitter assembly is also available without magnetic base for other applications.

for similar prism beamsplitter see
BR: 960 383 HOPP (JUNE '64)
FIG 6

| | |
|---|---|
| **R261** | **Variable Segmented Beamsplitter with Magnetic Base** |
| **R261A** | **Variable Segmented Beamsplitter without Magnetic Base** |

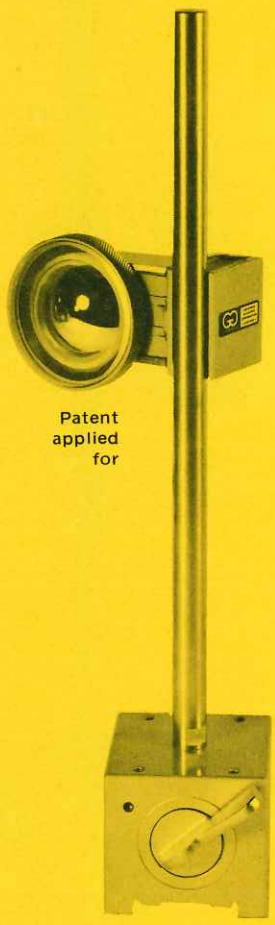
359/629

Bulletin 156-71 G
GAERTNER
PTICAL INSTRUMENTATION

NEW

# Beamsplitter-Spreader

**A unique device combining the functions of a beamsplitter and a beam spreader in one unit.**



Patent applied for

This component designed specifically for holography incorporates many features that are advantageous for simplifying holographic exposures. *Back reflection fringes are completely eliminated.*

The magnetic holder design provides multiple angular and linear adjustments with permanence of setting.

The beamsplitter consists of a circular glass disc 54 mm in diameter with steel backing and a knurled rim. The disc is coupled magnetically to a 13 mm support rod which is in turn mounted in a magnetic base (Gaertner R281M).

The beamsplitter divides an incident laser beam into two reflected beams, one of which forms a diverging cone of light (10°) while the other is not expanded. Variations in output from separation angle and beam intensity ratio are possible over a wide range with this device.

| | |
|---|---|
| **R262** | **Beamsplitter — Spreader with Magnetic Base** |
| **R262A** | **Beamsplitter — Spreader without Magnetic Base** |

MAL/2M/6-71/PRINTED IN U.S.A.

GAERTNER®

**GAERTNER SCIENTIFIC CORPORATION**
1201 WRIGHTWOOD AVE., CHICAGO, ILL. 60614 • TEL. 312-281-5335 • CABLE "SCIENTIA"

*Designers and manufacturers of precision scientific optical and measuring instruments in the U.S.A.*